

MESHCHERYAKOV, Aleksey Il'ich; FEYGIN, L.M., otv. red.; ABARBARCHUK, F. I.,
red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Crosscutting and boring machines and the tool] Sboechno-burovye ma-
shiny i instrument. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po
gornomu delu, 1961. 76 p. (MIRA 14:11)
(Boring machinery)

NOVOZHILOV, Mikhail Galaktionovich, prof., doktor tekhn.nauk. Prinsipal
uchastiye MESHCHERYAKOV, A.I., dotsent. ZURKOV, P.E., prof.,
retsenzent; ORLOV, Ye.I., otv.red.; KAUFMAN, A.M., red.izd-va;
BERESLAVSKAYA, L.Sh., tekhn.red.; BOLDYREVA, Z.A., tekhn.red.

[Open-pit mining] Otkrytye gornye raboty. Moskva, Gos.nauchno-
tekhn.izd-vo lit-ry po gornomu delu, 1961. 474 p.

(Strip mining)

(MIRA 14:6)

MESHCHERYAKOV, A. I.
MESHCHERYAKOV, A. I.

Method of higher nervous function tests in man. Zmur. vys.nerv.
deliat. 4 no.4:574-580 J1-Ag '54. (MLRA 8:3)

1. Otdel patofiziologicheskogo i klinicheskogo izucheniya uchashchikh-
sya spetsial'nykh shkol Instituta defektologii APN RSFSR.

(CENTRAL NERVOUS SYSTEM, physiology
higher nervous funct. tests in man, technic)

MESHCHERYAKOV, A.I.

Conference on problems of the physiology and pathology of vocal
activity. Vop.psikhol. 2 no.2:126-128 Mr-Apr '56. (MLBA 9:8)
(Speech, Disorders of)

111 201 10 6 1956 10 1
LUBOVSKIY, V.I.; MESHCHERYAKOV, A.I.

Conference on problems of the physiology and pathophysiology of
higher nervous activity in children. Vop. psikh. 2 no.5:184-
189 S-0 '56. (MLRA 10:1)

(Child study)

MESHCHERYAKOV, A.I.

Cybernetics and some problems in psychophysiology. Vop. psikhol.
3 no.2:163-166 Mr-Apr '57.

(Psychology, Physiological) (Cybernetics)

(MLRA 10:6)

LUBOVSKIY, V.I.; MESHCHERYAKOV, A.I.

Conference on problems in morphology, physiology, and
biochemistry as related to age. Vop.psikhol. 3 no.3:180-183
My-Je '57.

(Age) (Physiology)

(MLRA 10:8)

LURIYA, A.R.; PEVZNER, M.S.; ZISLINA, N.N.; VINOGRADOVA, O.S.; LUBOVSKIY, V.I.; MESHCHERYAKOV, A.I.; MATYUSHKIN, A.M., red.; LAUT, V.G., tekhn.red.

[Retarded children; studies on characteristics of the higher nervous activity of oligophrenic children] Umstvenno otstalyi rebenok; ocherki izucheniia osobennostei vysshei nervnoi deiatel'nosti detei-oligofrenov. Pod red. A.R.Lurii. Moskva, 1960. 201 p. (MIRA 13:10)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut defektologii.

(MENTALLY HANDICAPPED CHILDREN)

MESHCHERYAKOV, A.I.

Some problems of image in connection with the peculiarities
of the mental development of the blind deaf-mute child.
Vop. psikhol. 6 no.4:111-120 J1-A; '60. (MIRA 13:9)

1. Institut defektologii Akademii pedagogicheskikh nauk
RSFSR, Moskva.

(Deaf--Education) (Orientation)
(Blind--Education)

MESHCHERYAKOV, A.M.

Using thiocarbamide in the colorimetric determination of phosphoric acid. Pochvovedenie no.3:88-90 Mr '56. (MLBA 9:8)

1. Tadzhikskiy sel'skokhozyaystvennyy institut, Kafedra agrokhimii i pochvovedeniya, Stalinabad.
(Soils--Analysis) (Phosphoric acid) (Urea)

MESHCHERYAKOV, A. M.

Meshcheryakov, A. M. "On the anatomy of the *M. pudendus*," Trudy Kazansk. gos. med. in-ta, 1948, Issue 1, 1948, p. 133-70--bibliog: 25 items.

SC: U-3264, 16 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

1. MESHCHERYAKOV A. M., MURAT, A. M.

2. USSR (600)

4. Nervous System, Sympathetic

7. Pterygopalatine ganglion. Arkhiv anat.gist. i embr. 29 No 5. 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

MESHCHERYAKOV, A.M.; SYSAK, N.S.

Discussion on F. A. Volynskii's and E. P. Melman's article Synapses
of certain abdominal organs. Arkh. anat., Moskva 30 no.2:94-95 Mar-
Apr 1953. (CJML 24:3)

MESHCHERYAKOV, A.M.; KOROTKOV, A.G.

Role of the posterior spinal radices in innervation of the gastro-intestinal system. Fiziol. zh. SSSR 39 no. 4:443-450 July-Aug 1953.
(CIML 25:1)

1. Department of Human Anatomy and Department of Physiology of Kazan' State Medical Institute.

Meshecheryakov, A. M.

The colorimetric determination of phosphoric acid with
thiourea. A. M. Meshecheryakov. Izvst. Vses. Estestven.
Nauk, Akad. Nauk Tadzhik. S.S.R. 1956, No. 13, 17-23.~
A study of the reactions between thiourea and complex
phosphomolybdenum compds. showed that it was possible
to obtain phosphomolybdenum blue which is stable for a
period of 1.5 months. The reaction conditions were
established. A reducing agent of thiourea with SnCl_2 yields
the phosphomolybdenum blue which is stable for 6-8 hrs.
if not heated. Either of these methods can be used for the
colorimetric detn. of phosphoric acid and phosphates.

J. Royne Leach

MESHCHERYAKOV, A.M.

Method for the colorimetric determination of molybdenum. Izv. Otd.
est. nauk AN Tadzh.SSR no. 17:3-15 '56. (MIRA 11:8)

1. Kafedra agrokhimii i pochvovedeniya Tadzhikskogo sel'khozinstituta.
(Molybdenum--Analysis)
(Colorimetry)

USSR / Human and Animal Morphology - Nervous System.

8

Abs Jour : Ref. Zhur. - Biol., No. 22, 1958, 101461

Author : Meshcheryakov, A. M. ; Korotkov, A. G.

Inst : Kazan Medical Institute

Title : Experimental Morphological Materials Toward the
Study of the Sources of Innervation of the Ductus
Deferens.

Orig Pub : Sb. nauchn. rabot, Kazansk. med. in-t, 1957, No.
4, 60-69

Abstract : In 55 cats and dogs the hypogastric and pudendal
nerves were transected, along with the anterior
roots of the sacral division of the spinal cord,
the ductus deferens (DD), and the internal sper-
matic artery. In addition, the ganglia of the
sacral division of the truncus sympathicus were
removed, as well as the pelvic plexus and the

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USSR / Human and Animal Morphology - Nervous System.

S

Abs Jour : Ref. Zhur. - Biol., No. 22, 1958, No. 101481

ganglia of the celiac plexus. It was shown that the DD has both a sympathetic and a parasympathetic innervation. The sympathetic nerves (SN) reach the DD through the hypogastric nerves, the internal spermatic plexus, and from ganglia of the lumbar and sacral divisions of the sympathetic trunk. The SN supply the DD as either independent nerve bundles or separate fibers, or via bundles of nerve fibers of other origin. In the pelvic plexus the SN are not interrupted but pass through it and proceed to the smooth muscle layer of the wall of the DD. Parasympathetic fibers pass to the DD through the anterior roots of the spinal nerves and course with the pelvic parasympathetic nerves and the pudendal nerve. These fibers, as preganglionic fibers, are interrupted

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USSR / Human and Animal Morphology - Nervous System.

S

Abs Jour : Ref. Zhur. - Biol., No. 22, 1958, No. 101481

in the cells of the ganglia of the pelvic plexus, the processes of which, in the form of fibers, extend to the wall of the DD. In the wall of the DD there are multipolar nerve cells. No distinct differences in the innervation of the DD were noticed between cats and dogs.

Card 3/3

USSR / Human and Animal Morphology - Nervous System. S

Abs Jour : Ref. Zhur. - Biol., No. 22, 1958, No. 101478

Author : Meshcheryakov, A. M.

Inst : Kazan Medical Institute

Title : Experimental Morphological Analysis of the Structure of the Pudendal Nerve and the Inter-Relations Between It and the Vegetative Nervous Plexus of the Pelvis.

Orig Pub : Sb. nauchn. rabot. Kazansk. med. in-t, 1957, No. 4, 116-124.

Abstract : In 150 preparations from 100 cadavers of persons of varying ages (beginning in the embryonic stage) and in 35 preparations from cadavers of dogs, cats, monkeys, sheep, horses, cows, and pigs, it was shown that the pudendal nerve (PN) is a complex nerve, consisting, in addition to

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USSR / Human and Animal Morphology, Normal and Pathological
Nervous System.
Abs Jour : R Zh Biol., No 21, 1958, No 97068

Author : Meshcheryakov, A.M.
Inst : Kazan Medical Institute
Title : Experimental-morphologic Analysis of the Structure of nn. Erigentes and Their Participation in the Formation of Nerve Plexuses of the Abdominal Cavity and Pelvis.

Orig Pub : Sb. nauchn. rabot Kazansk. med. in-t, 1967, vyp. 4, 105-115

Abstract : In three series of experiments on 50 cats, the nerves of the pelvis in the cavity of the small pelvis, or all anterior sacral radicles of the spinal cord inside the vertebral canal, or all nodes of the marginal sympathetic trunk of the sacral region on both sides, were cut. After 24-36 hours, the material was studied, following impregnation, according to Pil'shovskiy-Tros-Lavrent'yev. The author concludes that

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USSR / Human and Animal Morphology, Normal and Pathological
Nervous System.

Abs Jour : R Zh Biol., No 21, 1958, No 97068

sensory (somatic), sympathetic (SN) and parasympathetic (PN) nerves participate in pelvic plexus (PP). SN from formations of hypogastric plexuses and of nodes of the marginal sympathetic trunk of the sacral region are postganglionic; they run through PP without interruption, and end in the smooth muscles of the pelvic organs. PN, starting in the parasympathetic nucleus of the spinal cord, pass through formations of 2-4 anterior sacral radicles, and enter into pudental and pelvic nerves. PP, running through the formation of the pudental nerve, enter into PP and end there with a pericellular apparatus on the cells of PP nodes. PP, which run through the formation of the pelvic nerves, pass through into the cavity of the small pelvis and, with one of their parts, end on the cells or nodes of the extramural part of PP, and with the other - on the cells of the intramural part of PP; their third part runs to the nodes of mesenteric plexuses.

Card 2/3

USSR / Human and Animal Morphology (Normal and
Pathological). Nervous System. Peripheral
Nervous System.

S

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16953

Author : Meshcheryakov, A. M.

Inst : Not given

Title : Comparative Anatomy of Inferior Mesenteric
and Superior Hypogastric Plexuses of Man
and Some Vertebrates

Orig Pub : V sb.: Izbr. vopr. morfol. nervn. sistemy i
krovosnabzh. nervov. Chelyabinsk, 1958, 51-57

Abstract : On the cadavers of 10 humans, 6 sea urchins,
2 carassius, 4 pikes, 10 frogs, 10 lizards,
7 wild ducks, 3 chickens, 2 susliks, 2 rabbits,
4 guinea pigs, 10 cats and 10 dogs, it was
shown that the inferior mesenteric (IM) and

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USSR / Human and Animal Morphology (Normal and
Pathological). Nervous System. Peripheral
Nervous System.

5

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16953

superior hypogastric plexuses (SHP) in man and animals originate from the inferior mesenteric ganglion (IG), aortic plexus (AP) and others. IG in man consists of 1-5 separate nodules, in other mammals of 1-4, and in lower vertebrates it is not always found. By means of visceral branches IG is connected with the 1-3rd lumbar ganglia of the sympathetic trunk and through the AP it is connected with solar, superior mesenteric, kidney and adrenal plexuses. SHP in man lies on the ventral surface of the abdominal aorta; it consists of nodules of various size and form. In cats, dogs, guinea pigs and

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USSR / Human and Animal Morphology (Normal and
Pathological). Nervous System. Peripheral
Nervous System.

S

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16953

others, instead of SHP there are hypogastric nerves which originate from the caudal-mesenteric ganglion. In fish, amphibians, reptiles and birds these nerves are still not differentiated and are in direct connection with blood vessels. From IG and AP, branches run to the inferior mesenteric artery, forming on it the plexus of the same name. Secondary plexuses, which originate as a result of division of the inferior mesenteric plexus, are in turn divided into smaller plexuses. In cats, dogs, guinea pigs and others the left colic, S-shaped and superior rectal plexuses are not

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56

USSR / Human and Animal Morphology (Normal and
Pathological). Nervous System. Peripheral
Nervous System.

5

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16967

Author : Meshcheryakov, A. M.

Inst : Not given

Title : Participation of nn. Erigentes in the
Formation of Nerve Plexuses of the Pelvis
and Abdominal Cavity

Orig Pub : V sb.: Izbr. vopr. morfol. nervn. sistemy i
krovoobrazh. nervov. Ggelyabinsk, 1958, 5-15

Abstract : In three series of experiments on 50 cats,
either pelvic nerves in the cavity of the
small pelvis, or all anterior spinal-cord
sacral roots or all ganglia of the sacral
region of the marginal sympathetic trunk (MST)

Card 1/3

USSR / Human and Animal Morphology (Normal and
Pathological). Nervous System. Peripheral

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APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001033

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16967

were sectioned. It was shown that somatic,
sympathetic and parasympathetic nerves (PN)
participate in the pelvic plexus (P).
Sympathetic nerves from the hypogastric P and
from the ganglia of MST are postganglionic and
pass through the pelvic P without interruption.
PN of the sacral section, beginning from
the parasympathetic nucleus of the spinal
cord, pass in the make-up of 2-4 anterior
sacral roots and enter into nn. erigentes
and n. pudendus. The parasympathetic fibers,
which run in the make-up of the pudendal
nerve, enter the pelvic P and terminate on
the cells of its ganglia. PN which run in

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USSR/Human and Animal Morphology - (Normal and Pathological)
Nervous System. Peripheral Nervous System.

S

Abs Jour : Ref Zhur Biol., No 6, 1959, 26106

Author : Meshcheryakov, A.M.

Inst : -

Title : On the Problem of Parasympathetic Nerves of the Sacral
Region. Report 2.

Orig Pub : V sb.: Izbr. vopr. morfol. nervn. sisteny i krovoobrazh.
nervov. Chelyabinsk, 1958, 16-22

Abstract : It was shown on cadavers of 100 humans (50 adults, 40
children, 10 embryos), 6 dogs, 4 monkeys, 5 sheep, 8
horses, 2 cows, 2 pigs and 8 cats that pudental nerve
(PN), aside from somatic, contains also sympathetic and
parasympathetic fibers which participate in the forma-
tion of pelvic plexus (PP). Sympathetic fibers enter
into the composition of PN in the region of the small
pelvic from the nodes of the sacral region of the

Card 1/2

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MESHCHERYAKOV, A.M.; KOROTKOV, A.G.

Valerii Nikolaevich Murat; on his 60th birthday. Arkh.anat.gist.1
embr. 39 no.11:128 N '60. (MIRA 14:5)
(MURAT, VALERII NIKOLAEVICH, 1900-)

MESHCHERYAKOV, A.M.

Importance of the ratio between acid and the molybdate anions in
colorimetric determination of phosphorus. Pochvovedenie no. 2:
75-80 F '65 (MIRA 19:1)

1. Tadzhikskiy sel'skokhozyaystvennyy institut, Dushanbe.
Submitted August 1, 1963.

MESHCHERYAKOV, A.N.

Antagonism between bromides and morphine. Farm. i toks. 19 no.5:
22-24 S-0 156. (MLRA 10:3)

1. Kafedra farmakologii (zav. - prof. A.K.Sangaylo) Sverdlovskogo
meditsinskogo instituta.

(MORPHINE, antagonists,
bromides (Rus))

(BROMIDES, antagonists,
morphine (Rus))

MESHCHERYAKOV, A. N.

"Repair of Damaged Concrete by the Method of Cementation," Gidrotekhnicheskoye
Stroitelstvo, Moscow, 1947.

GANICHEV, I.A., inzh.; MESHCHERYAKOV, A.N., inzh.; KHEYFETS, V.B.

New methods of making antiseepage curtains. Gidr.stroi.31 no.2:14-18
F '61. (MIRA 14:3)

(Soil percolation) (Grouting)

MESHCHERYAKOV, A.N., inzh.

Cylindrical enclosure for the underwater repair of wicket
gates of draft tubes of the Dnieper Hydroelectric Power Station.
Energ. stroi. no.27:58-60 '62. (MIRA 15:9)

1. Trest "Gidrospeystroy".
(Dnieper Hydroelectric Power Station--Maintenance and repair)

RESEARCH, V. 1. 1.

"Disturbance of the Interaction of the Two Dipoles and the
the Formation of the Polymer Reaction in the Polymerization of
the grain." Carried Sol, Sol. in Int. J. Chem. Phys. 1961, 1, 1
RSPSR, Moscow, 1961. (L. 1961, No. 1, 1961).

Of: Sol. 1961, 1, 1961.

COMMON ELEMENTS																										PROCESSES AND PROPERTIES INDEX																									
1ST AND 2ND CIPHERS																										3RD AND 4TH CIPHERS																									
1A																										10																									
<p>Isomerization of octane. A. P. Meshcheryakov and E. P. Kaplan. <i>Bull. acad. sci. U. R. S. S., Classe sci. math. nat., Ser. chim.</i> 1938, 1055-60 (in English, 1960). Isomerization of $n\text{-C}_8\text{H}_{18}$ was conducted at atm. and higher pressures. Isomerization at atm. pressure was carried out in the presence of $\text{AlCl}_3 + \text{HCl}$ and $\text{AlBr}_3 + \text{HBr}$. At room temp. $n\text{-C}_8\text{H}_{18}$ isomerizes up to 40%. The product was sep'd. from the catalyst, treated with H_2SO_4, soda, and water, dried over CaCl_2, and dist'd. over metallic Na. After 140 hrs. isomerization in the presence of 10% $\text{AlCl}_3 + \text{HCl}$ the octane no. of the isomers was 10 points higher than that of $n\text{-C}_8\text{H}_{18}$. Isomerization was also conducted for 1 hr. at 408-418° under 70 atm. in the presence of MoS_3. The fraction b. 30-127.5° contained 14.2% iso compds. Isomerization was accompanied by cracking. The octane no. of the isomers was 8 points higher than that of $n\text{-C}_8\text{H}_{18}$. With H_3PO_4 isomerization was negligible, the chief reaction being polymerization of cracking products with the formation of hydrocarbons b. over 130°. The octane nos. of 3-methylheptane and 2,5-dimethylhexane were det'd. The results show that the addn. of a side Me group to an 8-C chain increases the octane no. of the isomer by 30-40 points. B. Z. K.</p>																																																			
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SUBJECT INDEX																										SUBJECT INDEX																									
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<p>CA</p> <p>18</p> <p>Fractional evaporation of commercial magnesium chloride solutions. A. P. Meshcheryakov. <i>J. Chem. Ind. (U. S. S. R.)</i> 17, No. 7, 42-3(1940).—Preliminary evapn. and pptn. of other salts, before sepg. $MgCl_2$, are not economically practical. H. M. Leicester</p>																									
<p>ASM-SLE METALLURGICAL LITERATURE CLASSIFICATION</p>																									
<p>FROM STATION</p>													<p>FROM BOWLING</p>												
<p>14080 14081 14082 14083 14084 14085 14086 14087 14088 14089 14090 14091 14092</p>													<p>14093 14094 14095 14096 14097 14098 14099 14100 14101 14102 14103 14104 14105</p>												

1ST AND 2ND CROERS																										3RD AND 4TH CROERS																									
COMMON ELEMENTS																										COMMON ELEMENTS																									
<p>Improving Diesel fuel. A. P. Meshcheryakov U.S.S.R. 60,504, June 30, 1940. The cetane no. of Diesel fuel is increased by adding high-mol. ethers, such as heptyl or octyl ether. M. Hosh</p>																										<p>21</p>																									
<p>ASR-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																										<p>6-2</p>																									
<p>1ST AND 2ND CROERS</p>																										<p>3RD AND 4TH CROERS</p>																									
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CA

117 AND 120 CODES

PROCESSES AND PROPERTIES INDEX

120 AND 121 CODES

21

Components of safety fuels. D. N. Andreev, A. P. Meshcheryakov, and A. D. Petrov. *J. Applied Chem. (U.S.S.R.)* 19, 705-8(1946)(in Russian). - In the search for high-boiling, explosion-safe, high-octane hydrocarbons, the following were synthesized: (1) Dimer of diisobutylene (I), by boiling the latter for 50 hrs. with 25% FeCl₃, yield 2.0%, b. 243-6°, n_D²⁰ 1.4510, d₄²⁰ 0.7926, Br no. 73.9, f. p. -98°. (2) Isohexadecane (II) was prepd. by hydrogenation of I over Ni under pressure at 220°, b. 241-3°, n_D²⁰ 1.4435, d₄²⁰ 0.7846, f. p. below -70°. (3) Isopropyl-naphthalene (III). A stream of C₁₁H₁₄ C₁₁H₁₂ is led into concd. H₂SO₄ at 15-20° with an excluded, the isopropyl-sulfuric acid is then added gradually to a C₁₁H₁₄ soln. in paraffine gasoline over 2-3 hrs. at 60-70° and the mixt. stirred for 0-8 more hrs. at the same temp., 128 g. C₁₁H₁₄ yielded 72 g. of the fraction b. 250-270°, b. 260-5°, f. p. -88°, d₄²⁰ 0.9852, n_D²⁰ 1.5881. (4) Isopropyl-tetralin (IV), by the same method as III, 200 g. tetralin yielded 181 g. of the fraction b. 240-60°, 57% of the theory, b. 245-55°, f. p. -78°, d₄²⁰ 0.9437, n_D²⁰ 1.5881. (5) Isopropylbenzene, by the same method. (6) A mixt. of a standard Baku gasoline, octane no. N 67.1, with 17% II, gave N 72.8; calcd. mixing N of II = 100.6. (7) Addn. of 10, 20, 40% III to gasoline of N 70.0, gave N 71.2, 75.3, 84.0, calcd. N of III = 82.0, 96.5, 105.0, in comparison, addn. of 60% isooctane gave for the mixt. only N 81.9. (7) A mixt. of 75% gasoline (N 67.1) with 25% diisopropylbenzene (b. 175-210°, f. p. below -105°) gave N 80.2, calcd. N 107. A mixt. of 70% gasoline with 30% polyisopropylbenzene (b. 220-50°, f. p. -88°) gave N 82.3, calcd. N 108.6. N. Thon

COMMON ELEMENTS

MATERIALS INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL INDEX

REGIONAL INDEX

5521. OXIDATION OF TRIISOBUTYLENE. Meshcheryakov, A.P. (Doklady Akad. Nauk S.S.S.R. (Rep. Acad. Sci. U.S.S.R.), 1948, vol. 60, 339-400. The triisobutylene obtained by Butlerov (J. Russ. Phys. Chem. Soc., 1879, vol. 11, 197) has been shown by Whitmore (J. Amer. Chem. Soc., 1941, vol. 63, 2045) to be a mixture of 1:1-dimethylpentylene and 2:2:4:6:6-pentamethyl-3-heptene. Oxidn of triisobutylene under varying degrees of severity yielded acid mixtures of different m.p., the yield decreasing with rise of m.p. The higher m.p. acids (91-94°C.) obtained by the milder selective oxidn conditions (20°C., 6 vol. 50% H₂SO₄ with gradual addition of an equal wt (on the hydrocarbon) of K₂Cr₂O₇ contain a greater proportion of methyl-tert-butylisopentylacetic acid. (L).

434 3.4 METALLURGICAL LITERATURE CLASSIFICATION

MESHCHERYAKOV, A. P.

PA 77T14

USSR/Chemistry - Tri-isobutylene
Chemistry - Oxidation

Apr 1948

"The Oxidation of Tri-isobutylene," A. P. Meshcheryakov, 2 pp

"Dok Ak Nauk SSSR" Vol LX, No 3

Discovery of new method for oxidation of tri-isobutylene permits a selective oxidization of isomers for purpose of obtaining mixtures of acid with not readily accessible methyl-tributylneopentylacetic acid. Submitted by Acad A. N. Nesmeyanov 24 Feb 1948.

77T14

C. A

The composition and structure of diisobutylenes and triisobutylenes formed from isobutyl alcohol under the influence of sulfuric acid. A. P. Meshcheryakov, M. I. Baturin,

and A. D. Petrov (Acad. Sci. U.S.S.R., Moscow). *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1950, 2825. Refluxing 1,2,1-iso-BuOH with 1,2,1- H_2SO_4 0.8 hrs and sepg., washing, and drying the org. layer gave 75% *di-* and *triisobutylenes*, with some 30% *disobutylenes*. The gaseous products consisted of isobutylene 40, 2-butene 12, and satd. hydrocarbons 48%. The dimer fraction yielded some 0.1 g material corresponding to 2,2,4-trimethyl-3-pentene (I), which on further distn. was sepd. into 3,4-dimethyl-2-pentene (II), b. 104-105°, d_4^{20} 0.7125, n_D^{20} 1.4044, n_D^{25} 1.3988, and n_D^{30} 1.3910; d_4^{20} 0.7125, n_D^{20} 1.4012; confirmation was had by Raman spectra of the compds. and of their hydrogenation products (cf. Barzulin, *et al.*, C.A. 38, 14279). The entire octene fraction on this basis was given the compn.: 75%, II, 15%, I, and 10%. 2,3,4-trimethyl-3-pentene (I) was obtained as 2,3,4-trimethyl-3-pentene at 0°, it b. 104-105°, d_4^{20} 0.7125, n_D^{20} 1.4044, and on hydrogenation gave the satd. hydrocarbon, b. 127-128°, d_4^{20} 0.7187, n_D^{20} 1.4225, identified by the Raman spectrum as 2,2,4-trimethyl-3-pentamethylheptane, in accord with Whitmore's ozonization studies (C.A. 35, 6564). Oxidation by dichromate mixt. gave the Butlerov acid [J. Russ. Phys. Chem. Soc. 5, 187 (1873), 11, 107(1879)], m. 65-7° (really an acid mixt.), yielding the Me ester mixt., b. 217-20°, d_4^{20} 0.8880, n_D^{20} 1.4408; the free acid gave a dimeric mol. wt. in C_6H_6 . The oxidation products are identical with those from triisobutylene made from isobutylene at 0°. C. M. Kosolapoff

RESEARCH, . . .

USSR/Physics - Combination Scattering Chemistry - Organic Compounds Apr 50

"Study of the Degree of Oxidation of Certain Alcohols and Phenols by the Method of Combination Scattering of Light," M. I. Batuyev, A. P. Meshcheryakov, A. I. Matveyeva, Inst of Org Chem, Acad Sci USSR, 5 pp

"Zhur Eksper i Teoret Fiz" Vol XX, No 4

Shows by subject method that increase in degree of oxidation of OH group in a series of alcohols (pentamethyl ethanol, phenol, trichlorodimethyl ethanol) is in complete agreement with chemical data. Submitted 6 Jan 50.

PA 159T96

[illegible]

USSR/Chemistry - Hydrocarbons
Unsaturated Ketones
Sep/Oct 51

"Synthesis of Unsaturated Ketones from Di- and Triisobutenes by the Kondakov Reaction," A. P. Meshcheryakov, L. V. Petrova, Inst of Org Chem, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 5, pp 576-581

From carefully isolated α -form of triisobutene diisopentylethylene synthesized 4-neopentyl-6,6-dimethylheptene-3-one-2 and 5-neopentyl-2,7,7-trimethyloctene-4-one-3. From diisobutene synthesized 2,5,7,7-tetramethyloctene-4-one-3.

195T17

USSR/Chemistry - Hydrocarbons
(Contd)
Sep/Oct 51

Characterizes all 3 products. Discusses reaction mechanism and determines compn of initial triisobutene (mixture of α and β -forms).

195T17

PA 195T17

MESHCHERYAKOV, A. P.

MESHCHERYAKOV, A. P.

"The life and work of Nikolai Alexandrovich Prilezhaev." Akhrem, A. A.,
Prilezhaev, E. N. and Meshcheryakov, A. P. (p. 1925)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1951, Vol. 20, No. 11.

MESHCHERYAKOV, A.P.; PETROVA, L.V.

Cleavage of the elements of hydrogen halides from monohalides of hydrocarbons of the C_nH_{2n+2} series. Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci. '52, 165-9 [Engl. translation].
(CA 47 no.19:9896 '53)

Jan/Feb 52

USSR/Chemistry - Hydrocarbons

"Splitting Off of Elements of Hydrogen Halides From Monohalogen Derivatives of Hydrocarbons of the C_nH_{2n+2} Series," A. P. Meshcheryakov, L. V. Petrova, Inst of Org Chem, Acad Sci USSR

"Iz Ak Nauk, Otdel Khim Nauk" No 1, pp 152-156

KOH in alc will split the hydrogen needed for formation of hydrogen halides from halogen hydrins of dimethyl neopentyl carbinol ($2Cl(I) 2,4,4$, - trimethylpentane). The hydrogen splits off from the most highly hydrogenated C-atom, of a methyl

208T12

Jan/Feb 52

USSR/Chemistry - Hydrocarbons
(Contd)

rather than a methylene group, contrary to Zaytsev's rule. This exception to the rule can be explained by presence of the neopentyl radical, just as the addn of hydrogen bromide to neopentyl ethylene is the only exception to Markovnikov's rule. The quantity of the β -forms in di-isobutene depends on the conditions under which it is obtained. Di-isobutene obtained by Butlerov's method contained the highest quantity (approx 20%). A much smaller quantity (10%) was obtained in the splitting off of HCl with alcoholic alkali from $2C_1$ (or I) 2,4,4-trimethylpentane.

208T12

MESHCHERYAKOV, A. P.

126-101-101 YAKOV, A.

Chem Obs V48

1-25-54

Organic Chemistry

~~Dimethylmalonic acid~~ A. P. M. ...
Org. Syn. Coll. Vol. 2, p. 101 (1955)
738 g. KMnO₄ and 100 ml. H₂O
stirring 600 g. ...
been ...
100 g. ...
is ...
and ...
yield ...

THE HONORABLE

Chem Abs 448

1-25-54

Organic Chemistry

Trimethylacetic acid, A. P. Mesocherovskiy and I. L. V. Petrova, Akad. Nauk S.S.S.R., Inst. Org. Khim., Selsy Org. Soedinenii, Sbornik 2, 132-3 (1952); cf. C.A. 45, 537i. —Heating with stirring a mixt. of 50 g. KOH, 2.5 l. H₂O, and 365 g. KMnO₄ at 50-5° while over 1 hr, 108 g. triisobutylene is added, followed by 4 hrs. at 85-90°, stirring without heating 6 hrs., cooling, steam distn., addn. of 150 ml. MeOH to the flask residue, filtration of MnO₂, and concn. of the aq. filtrate gave Me₃CCO₂K in residual soln. This treated with 350 ml. 15% H₂SO₄ and extd. with Et₂O gave on evapn. of the dried ext. and distn. of the residue 21.5% Me₃CCO₂H, b. 102-4°. G. M. Kosolapoff

7-19-54

USSR/Chemistry - Hydrocarbons

1 Jul 52

"Synthesis of Hydrocarbons of the Composition C₁₀-C₁₁ With Two Quaternary Carbon Atoms," A. P. Meshcheryakov, Ye. I. Erzyutova, A. D. Petrov, Corr Mem, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXXV, No 1, pp 111-113

2-chloro-2, 3, 3-trimethylbutane and 3-chloro-3, 4, 4-trimethylpentane are comparatively unreactive in the Szigard-Werner synthesis leading to hydrocarbons with 2 quaternary carbon atoms. 2,2,2-Trimethyl-3-ethylpentane, 2,2,3,3-tetramethylpentane, 2,2,3,3,5-pentamethylhexane, and 2,2,3,3,3-tetramethylhexene-5 were synthesized and characterized. On the example

224716

of the synthesis of 2,2,3,3-tetramethylhexene-5, it was shown that using an alkyl halide with a double bond in the beta position does not increase the yield of hydrocarbons containing 2 rows of quaternary carbon atoms.

MESHCHERYAKOV, A.P.

224716

MESHCHERYAKOV, A.P.

Synthesis of mixed ethers and polyethers of polyvalent alcohols. A. P. Meshcheryakov, M. P. Shtostakovskii and P. V. Tsybuz (Inst. Chem. Acad. Sci. U.S.S.R., Moscow). *Dokl. Akad. Nauk SSSR*, 2, 824-26 (1957). --Hydrogenation of alkyl vinyl ethers over Ag-Al-Ni alloy catalyst (cf. C.A. 31, 10007) readily yields the corresponding mixed ethers. The catalyst is prepd. by treatment of 150 g. 50% Al-Ni alloy with 500 ml. 4% NaOH, then with a similar amt. of NaOH after subsidence of the reaction, and 2 more similar aunts. after 3-4 hrs. The catalyst retains appreciable aunts. of Al, thus differing from the conventional Raney Ni. The hydrogenations were run at 80-140 atm. H₂ and gave about 95% yields of the satd. ethers. Thus, BuOCH=CH₂ gave EtOEt; (CH₃OCCH=CH₂)₂ gave (CH₃OCCH₂)₂, and (CH₃CH₂OCCH=CH₂)₂ gave (CH₃CH₂OCCH₂)₂. b_p 105-5.5°/0.420, n_D²⁰ 1.4070. G. M. Kozlovskii

2

Jan

MESHCHERYAKOV, A. P.

U S S R .

Catalytic hydrocondensation of carbon monoxide with olefins. XI. Behavior of trimethylbutane and tetramethylbutene in hydrocondensation catalysis. Ya. T. Etlus, F. V. Puzitskiy, and A. P. Meshcheryakov (Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1954, 149-53; *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1954, 123-4 (English translation); cf. *C.A.* 49, 4540h. A study of hydrocondensation of CO with $\text{Me}_3\text{C:CHMe}$ and $\text{Me}_3\text{C:CMe}_2$ showed that $\text{Me}_3\text{C:CHMe}$ enters hydrocondensation only to the extent of 5-8% while 30-5% is hydrogenated to isopentane; $\text{Me}_3\text{C:CMe}_2$ enters hydrocondensation with CO to the extent of 10%, while 50% is hydrogenated to 2,3-dimethylbutane. The hydrocondensation products were not identified. Dehydration of iso-AmOH over Al_2O_3 at 450-500° gave mixed iso-PrCH:CH₂, $\text{Me}_3\text{C:CHMe}$ and MeEtC:CH_2 ; this mixt. was treated with dil. H_2SO_4 with ice cooling, and the aq. layer sep'd. and dild., yielding 45% $\text{Me}_3\text{C:CHMe}$, b.p. 37-8°, d_4^{20} 0.6500, n_D^{20} 1.3850. $\text{Me}_3\text{C:CMe}_2$ was hydrogenated over 20% Ni catalyst (cf. Bag, *et al.*, *C.A.* 23, 2553g) at 80-100 atm. H and 100-80°; the resulting $\text{Me}_3\text{CC}(\text{OH})\text{Me}$, b.p. 118-20°, dehydrated over $\text{Al}_2(\text{SO}_4)_3$ 27 hrs. at 275° gave, after extensive fractionation, $\text{Me}_3\text{C:CMe}_2$, b. 71-3°, d_4^{20} 0.7075, n_D^{20} 1.4123. C. M. K.

6

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Meshecheryakov, A. P.

Synthesis of *tert*-butyl hydroperoxide and di-*tert*-butyl peroxide and their radical study in light of the problem of structure of hydrogen peroxide. A. P. Meshecheryakov, M. I. Babin, and A. D. Matveeva. *Dokl. Akad. Nauk S.S.R., Div. Chem.*, 1958, 661-6 (Engl. translation). See C.A. 50, 2296g.

B. M. R.

1
PDM

24

M. M. Kucheryavskiy, A. P.

5

Chem Transformations of 2,3,3-trimethyl-4-pentanol. A. P. Kucheryavskiy and L. V. Petrova (N. M. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 1955, 1037-62.

Hydrogenation of 2,3,3-trimethyl-1-penten-4-one at 200° over 15 g. Al_2O_3 and 30 g. Ni catalyst at 100-20 atm. gave mainly 2,3,3-trimethyl-4-pentanol (I), b. 164-5.6°, n_D^{20} 1.4381, d_4^{20} 0.8557. Hydrogenation of I similarly at 280-300° gave mixed 2,3,4-trimethylpentane and 2,3,3-trimethylpentane. If the hydrogenation is run over Ni on SiO_2 at 280-300° 2,3-dimethylbutane is formed. I (25 g.) and 0 g. Mg in Et_2O treated with 27.3 g. AcCl gave 53.6% I acetate, b. 65-7°, d_4^{20} 0.8821, n_D^{20} 1.4269, which pyrolyzed at 430-50° over glass wool to mixed 2,3,3-trimethyl-4-pentene and 2,3,4-trimethyl-4-pentene, identified by oxidation and by phys. consts. 2,3,3-Trimethylpentane was prepd. by the Grignard route; pure product, b. 114-14.5°, d_4^{20} 0.7275, n_D^{20} 1.4073. Hydrogenation of 2,3-dimethyl-2-penten-4-one gave the *sald.* analog, b. 133-5°, d_4^{20} 0.8273, n_D^{20} 1.4087 (2,4-dinitrophenylhydrazones, m. 94-5°).

G. M. K.

MESHCHERYAKOV, A P

B-4

USSR / Physical Chemistry. Molecules. Chemical Bond

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25790

Author : A.P. Meshcheryakov, M.I. Batuyev, A.D. Matveyeva.

Inst : Academy of Sciences of USSR

Title : Synthesis of Tertiary Butyl Hydroperoxide and Ditertiary Butyl Peroxide and Their Optical Study in Light of Question of Hydrogen Peroxide Structure.

Orig Pub : Izv. AN SSSR, Otd. khim. n., 1955, No 4, 742-749

Abstract : Tertiary butyl hydroperoxide (I) and ditertiary butyl hydroperoxide (II) were prepared by alkylation of 1 mol of 27% H_2O_2 with 2 mols of monotertiary butyl sulfuric acid (III) at 0 to 10° in the duration of 4 to 5 hours; the yield was 80%. II is separated from I by the treatment with a 10 to 20% NaOH solution at 0 to 10°. III is prepared by the absorption of isobutylene by the 63% H_2SO_4 at 0 to 20°. Spectra of combined scattering of I and II are

Card : 1/2

- 33 -

MESHCHERYAKOV, A. P.

USSR/Chemistry - Organic chemistry

Card 1/1 Pub. 22 - 22/45

Authors : Meshcheryakov, A. P., and Petrova, L. V.

Title : Reaction of dichloroanhydrides of dibasic acids with alkenes in the presence of zinc chloride

Periodical : Dok. AN SSSR 103/2, 253-255, Jul 11, 1955

Abstract : The phenomena observed during the reaction of alkenes with dichloroanhydrides of dibasic acids are described. The existence of two functional groups in the anhydrides are explained as the cause for the two stages of the reaction. The chloroketo acid formed in the first stage reacts in the second stage with the second alkene molecule thus producing dichloroketone. The separation of HCl from the chloroketo acid and dichloroketone leads to the formation of keto acid and diketone. Eight references: 7 Russ. and USSR and 1 French (1869-1953).

Institution : Acad. of Sc., USSR, Inst. of Org. Chem. im. N. D. Zelinskiy

Presented by : Academician I. N. Nazarov, February 5, 1955

MESHCHERYAKOV, A.P.

8

Reaction of hydrogen exchange of saturated hydrocarbons with one and several tertiary carbon atoms and sulfuric acid. D. N. Kursanov, V. N. Setkina, and A. P. Meshcheryakov (Inst. Heteroorg. Compds., Acad. Sci. U.S.S.R., Moscow). Doklady Akad. Nauk S.S.S.R. 105: 279-81 (1955); *ibid.* C.A. 47, 851f. — H-D exchange of several labeled hydrocarbons with D_2SO_4 was studied in exposures up to 10.5 hrs. n-Octane gave 1.8-2% exchange; 3-methylheptane 100.1%; 2,3,4-trimethylpentane 93-9% exchange. Exchange of 3-methyl-3-D-heptane with H_2SO_4 resulted in considerable enrichment of the acid with D and a corresponding loss of D by the hydrocarbon. The labeled hydrocarbon was prepd. by dehydration of 3-hydroxymethylheptane over Al_2O_3 at 400° , yielding mixed octenes which with HCl gave 3-chloro-3-methylheptane, b_p $46.5-6.8^\circ$, d_4 0.8773, n_D^{20} 1.4322, which was converted to $RMgCl$ and this decompd. with D_2O ; 3-methyl-3-D-heptane was distd. and purified by chromatography on SiO_2 ; the product used had n_D^{20} 1.3982. The exchange reactions were run in a shaker at room temp. G. M. Kosolapoff

DM

MESHCHERYAKOV, A. P.

USSR/ Chemistry - Alkylation processes

Card 1/1 Pub. 40 - 13/25

Authors : Meshcheryakov, A. P.; Erzyutova, Ye. I.; and Petrov, A. D.

Title : Low temperature alkylation of alpha, and beta-olefins with tertiary alkyl halides in the presence of $ZnCl_2$

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 67-73, Jan 1956

Abstract : Low temperature alkylation of olefins with tertiary alkyl halides was investigated in the presence of zinc chloride and an explanation is given on the relation between the structure of the components and the nature of side reactions of isomeric conversions followed by the addition of chloroalkanes to alkenes. The isomeric octenes and decenes formed during butene-2 alkylation with tertiary butyl chloride or 2-chloro-2, 3-dimethylbutane, are described. The derivation of 4,4-dipropyldecene-5 (hydrocarbon with quaternary carbon) as an octene alkylation product is discussed. Eighteen references: 11 Russ and USSR, 4 USA, 1 Eng. and 2 Germ. (1869-1952). Table.

Institution : Acad. of Sc., USSR, Inst. of Organ. Chem. im. N. D. Zelinskiy.

Submitted : March 15, 1955

MESHCHERYAKOV, A. P.

AUTHORS: Batuyev, M. I.; Meshcheryakov, A. P.; and Erzyutova, A. D., 62-1-13/29

TITLE: Optical investigation of the structure of the lower isomers of isobutylene (Opticheskiye issledovaniya stroeniya nizhnikh izomerov izobutilena)

PERIODICAL: Izvestiya AN SSSR. Otdeleniye khim. nauk, 1956, No. 1, pp. 75 - 84 (USSR)

ABSTRACT: The inclination of isobutylene for polymerization found for the first time by Batuyev was investigated already by himself and described in a series of papers. This was also done by Wagner, Prilezhayev, Biltokov and others. The results of the chemical and optical investigation of the structure of the polymers of isobutylene hitherto published turned out to be contradicting. In the present paper the coincidence (as to the chemical and optical aspects) in the question as to the isomers prevailing in the corresponding fractions is pointed out. Beginning with the fraction of the trimer they are inactive as regards further polymerization. The active forms take part in the formation of highest polymers and do not accumulate in the lowest stages of polymerization. Furthermore it was explained that the assumption concerning a conditional double phenomenon (or a double) in the field of the frequency of double binding in lowest polymers (by

Optical investigation of the structure of the linear polymers of Isobutylene 02-41329
ylene

inversion isomerism does not correspond to the facts [formulae (1) to (XVI)]. There are 1 table, and 16 references, 11 of which are inavic.

ASSOCIATION: Institute of Mineral Fuels, AS USSR (Institut koryuchikh
iskopayemykh kopalnykh nauk SSSR)

SUBMITTED: July 27, 1955

AVAILABLE: Library of Congress

1. Isobutylene-Polymerization

Card 2/2

MESHCHERYAKOV, A. P.

62-1-21/23

AUTHORS: Meshcheryakov, A. P., Petrova, L. V.

TITLE: On the Synthesis of the Keto Acids and Mono-chloroanhydride Esters of Dibasic Acids and Olefins (Sintez katokislot iz efirov monokloroanhidridov dvukislotnykh i olefinov)

PERIODICAL: Izvestiya Akad. Nauk Otdeleniye Khimicheskikh Nauk, 1958
Nr 1, pp. 106 - 107 (U.S.S.R.)

ABSTRACT: Of all methods for the production of keto-acids (references 1-4) the catalytic methods of synthesis deserve special attention. Especially those based on the alkane basis and of the anhydrides and chloroanhydrides of the mono- or dibasic acids. In the present paper the authors report that for the first time from corresponding alkenes and chloroanhydrides according to the catalytic method were synthesized: 1) 6-keto-7-decene acid; 2) 8-methyl-6-keto-7-nonene-acid; 3) 8-ketodekanone acid; 4) 6-keto-dodekane acid; 5) 7,7,8-trimethyl-6-keto-8-nonene-acid; 6) 7,7,8-trimethyl-6-ketononane acid; 7) 6-ketotridekanone acid (obtained before by means of element-organic synthesis). There are 6 references, 2 of which are Slavic.

Card 1/2

On the Synthesis of the Keto Acid β -Mono-
chloroanhydride ester of Diethyl Acetoacetic Acid

62-1-11/25

ASSOCIATION: Institute of Organic Chemistry Acad. M. D. Zelinskiy, AS USSR
(Institut Organicheskoy khimii im. M. D. Zelinskogo Akad.ii
nauk SSSR)

SUBMITTEL: July 18, 1957

AVAILABLE: Library of Congress
1. Keto acids-Synthesis

Card 2/2

AUTHORS: Meshcheryakov, A. P., Glukhovtsev, V.G. 62-58-6-25/37

TITLE: The Synthesis of 1-Cyclopropyl-2-Cyclohexylcyclopropane
(Sintez 1-tsiklopropil-2-tsiklogeksiltsiklopropana)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk,
1958, Nr 6, pp. 780 - 783 (USSR)

ABSTRACT: In the present paper the authors describe a method of synthesis which they worked out for 1-cyclopropyl-2-cyclohexylcyclopropane. Besides, the authors tried to obtain 1-cyclopropyl-2-hexylcyclopropane from "enantovoy" aldehyde (?) and methylcyclopropylketone under the same conditions. Instead of an α -octenylcyclopropyl ketone, tetradecan-6-on-8 was, however, obtained. A new method of obtaining 5-chlorine-2-pentanone from acetopropylalcohol and hydrochloric acid was worked out. The condensation of methylcyclopropylketone under the action of catalysts (alcoholic KOH, C_2H_5ONa , $Ba(OH)_2$, $NaOH$, $NaOH$, KOH) was investigated. 2,4,6-tricyclopropyl-2,4 epoxyhexanon-6 was obtained. There are 7 references, 1 of which is Soviet.

Card 1/2

The Synthesis of 1-Cyclopropyl-2-Cyclohexylcyclopropane SOV/62-18-6-4517

ASSOCIATION: Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk
SSSR (Institute of Organic Chemistry imeni N.D.Zelinskiy, AS USSR)

SUBMITTED: January 21, 1958

1. Propanes--Synthesis
2. Ketones--Condensation
3. Alcohols
- Chemical reactions
4. Hydrochloric acid--Chemical reactions
5. Catalysts--Performance

Card 2/2

MESHCHERYAKOV, A.P.; PETROVA, L.V.; YEGOROV, Yu.P.

Reactivity of α, β -unsaturated ketones and β -halogen ketones in
Kishner reactions. Zhur.ob.khim. 28 no.9:2588-2595 S '58.
(MIRA 11:11)

1. Institut organicheskoy khimii AN SSSR.
(Ketones)

MAKARENKOV, V.V.; MESHCHERYAKOV, A.P.; PANCHENKOV, G.M.; PLATE, A.F.;
SHUYKIN, N.I.; YAKOVLEVSKIY, V.V.

Effect of the structure of individual hydrocarbons and ethers on
their combustion rate. Izv. vys. ucheb. zav.; neft' i gaz 2 no.4:
71-78 '59. (MIRA 12:10)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
im. akad. I.M. Gubkina.
(Hydrocarbons) (Ethers) (Combustion)

SOV/62-59-8-26/42

5(4)

AUTHORS:

Batuyev, M. I., Meshcheryakov, A. P., Matveyeva, A. D.

TITLE:

Raman Spectra of Divinyl Acetylene

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 8, pp 1485-1487 (USSR)

ABSTRACT:

The spectra were photographed by means of the spectrograph of the type ISP-51 with the Hg line (4358 Å). The individual lines obtained for the compound $\text{CH}_2 = \text{CH}-\text{C}\equiv\text{C}-\text{CH}=\text{CH}_2$ are given. Within the range of the triple bond two basic frequencies (intensive doublet) were obtained at 2165 and 2206 cm^{-1} , and four frequencies in the range of the double bonds (intensive doublet), at 1586, 1601 cm^{-1} , and two weaker lines at 1629 cm^{-1} . The appearance of the doublet is due to the possibility of the existence of rotatory isomers. The splitting-up of the frequencies of the double bonds is interpreted as the splitting of the frequency of the bond oscillations of two identical double bonds in each of the two possible isomers. The great number of lines (44 as against 30 in the case of one form only) is considered to point to the probable existence of both isomers.

Card 1/3

Raman Spectra of Divinyl Acetylene

SOV/62-59-8-26/42

The multiple bonds must, according to the energy minimum of the bond system, lie in one plane. On this condition the two isomers (the cis (I) and trans forms (II)) are possible. The authors continue by attributing the several lines obtained to the two isomers by means of comparing them with the infrared spectrum. The lines are also interpreted as resulting from the mutual influence of double bond - triple bond and double bond ~ double bond. A table lists the frequencies of the oscillations of the individual bond types. It follows that the triple bond in (I) with a high electron density corresponds to a pair of double bonds with a reduced electron density, while the triple bond in (II) with a reduced electron density corresponds to a pair of double bonds with a high electron density. The electron shells of the C atoms of the triple bond in (I) are more asymmetrical than in (II) so that there is a greater influence of this bond upon the double bonds in (I) than there is in (II). In the liquid

Card 2/3

Raman Spectra of Divinyl Acetylene

SOV/62-59-8-26/42

phase both isomeric forms are encountered; however, there is a marked preponderance of the trans form. There are 1 table and 9 references, 4 of which are Soviet.

ASSOCIATION: Institut ' goryuchikh iskopayemykh ; Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Mineral Fuels; Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: January 21, 1959

Card 3/3

5 (3)
AUTHORS: Meshcheryakov, A. P., Glukhovtsev, V. G. SOV/62-59-8-28/42
TITLE: Preparative Method for the Synthesis of Methylcyclopropylketone
PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 8, pp 1490-1492 (USSR)
ABSTRACT: First of all a survey of the development of the preparative
method for the above mentioned compound is given and the
following Soviet scientists are cited: Idz'kovskaya and Vagner
(Ref 11), Dem'yanov and Pinegin (Ref 12), Rozanov (Ref 15),
Slobodin and Shokhor (Ref 16), Zelinskiy and Den'gin (Ref 18),
D'yakonov (Ref 19). Acetopropylchloride was synthesized as the
initial product for the ensuing synthesis of methylcyclopropyl-
ketone. In the course of this process the method used up to now
could be improved so as to permit a yield of 76% instead of 64%.
Methylcyclopropylketone was obtained from acetylchloride and
caustic potash with a yield of 95% compared to the maximum
yield of 76% which has so far been obtained. A description of
the syntheses and the physical data of the materials obtained
are given in the experimental part. There are 27 references,
11 of which are Soviet.

Card 1/2

Preparative Method for the Synthesis of Methyl-
cyclopropylketone

SOV/62-59-8-28/42

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk
SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy,
Academy of Sciences, USSR)

SUBMITTED: February 9, 1959

Card 2/2

5:3400

77088
SOV/62-59-12-32/43

AUTHORS:

Freydlin, L. Kh., Meshcheryakov, A. P., Gorshkov, V. I., and Glukhovtsev, V. G.

TITLE:

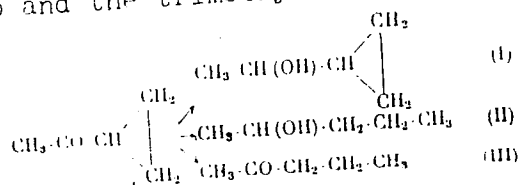
Brief Communication. Selective Reduction of Methyl Cyclopropyl Ketone Over the Zinc Catalysts

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 12, pp 2237-2239 (USSR)

ABSTRACT:

In catalytic reduction of methyl cyclopropyl ketone, two groups can be reduced: the carbonyl group and the trimethylene ring:



Card 1/3

The authors have found that Zn and Zn-Cu catalysts

Brief Communication. Selective Reduction of Methyl Cyclopropyl Ketone Over the Zinc Catalysts

77088
SOV/62-59-12-32/43

(in the temperature interval 80-160° and 130 atm pressure) cause selective reduction of the carbonyl group, according to path (I) of the above equation, while Cu catalysts first cause (at 80°) hydrogenation of the trimethylene ring (path III). 2-Pentanol is formed above 125°. This behavior of methyl cyclopropyl ketone during catalytic reduction is similar to the reduction of α, β -unsaturated ketones (and aldehydes). There are 2 figures; 2 tables; and 10 references, 7 Soviet, 3 U.S. U.S. references are: V. A. Slabey, P. H. Wise, J. Am. Chem. Soc., 71, 3252 (1949); R. V. Volkenburgh, K. W. Greenlee, J. M. Derfer, C. E. Boord, J. Am. Chem. Soc., 71, 3595 (1949); W. F. Bruce, G. Mueller, J. Seifter, J. L. Szabo, U. S. Pat. 2494084, Chem. Abstr., 45, 177 (1951).

ASSOCIATION:

N. D. Zelinskiy Institute of Organic Chemistry of the Academy of Sciences, USSR (Institut organicheskoy

Card 2/3

Brief Communication. Selective Reduction of
Methyl Cyclopropyl Ketone Over the Zinc
Catalysts

77088
SOV/62-59-12-32/43

khimi1 imeni N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: May 4, 1959

Card 3/3

5(3)
 AUTHORS: Meshcheryakov, A. P., Erzyutova, Ye. I. SOV/20-124-4-27/67

TITLE: Synthesis of 2,4,4-Trimethyl-3-Tert-Butyl Pentene-2 (Sintez 2,4,4-trimetil-3-tretichnobutilpentena-2). (of the β -Form of Butlerov's Triisobutylene) (β -formy triizobutilena Butlerova)

PERIODICAL: Doklady Akademii nauk SSSR, 1959. Vol 124, Nr 4, pp 826-829 (USSR)

ABSTRACT: A. M. Butlerov (Ref 1) ascribed the structure of the above-mentioned compound to the triisobutylene that was synthesized by him for the first time. Later on, other scientists proved that triisobutylene is a mixture of 4 isomers (Refs 2-4, etc). Thus, the problem of the form referred to in the subtitle has not yet been solved. It was interesting therefore to find the ways of synthesizing this hydrocarbon and to study its properties. Such a way was shown by the dehydration of di-tert-butyl isopropyl carbinol. The authors found that therein the primary dehydration is isomerized in acid medium. In this case, the double bond is shifted from the β - toward an α -position and the skeleton of the synthesized alkene is changed. The dehydration processes performed by the authors 1) according to Zigler (Tsigler, Ref 5), 2) on the action of

Card 1/2

Synthesis of 2,4,4-Trimethyl-3-Tert-Butyl Pentene-2
(of the β -Form of Butlerov's Triisobutylene)

SOV/20-124-4-27/67

HCl at -30° and 3) by way of Al_2O_3 at 220° invariably led to the formation of a mixture of α -alkenes exclusively (primarily 3,3,4,4-tetramethyl-2-isopropyl pentene-1, 2,4,4-trimethyl-3-tert-butyl pentene-1, as well as possibly 3,4,4-trimethyl-2-tert-butyl pentene-1). In order to remove the skeleton isomerization, the authors applied L. A. Chugayev's method of xanthation (Ref 6). Even in this case, however, they could synthesize for the first time, on the dehydration of di-tert-butyl isopropyl carbinol, the ordinary dehydration product mentioned in the title, in addition to the isomers (II), (III) and (IV). On the oxidation acetone and hexamethyl acetone were isolated. There are 9 references, 5 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskogo of the Academy of Sciences, USSR)

PRESENTED: July 28, 1958, by A. A. Balandin, Academician

SUBMITTED July 17, 1958
Card 2/2

SOV/20-128-1-25/58

5 (3)
AUTHOR:

Meshcheryakov, A. P.

TITLE:

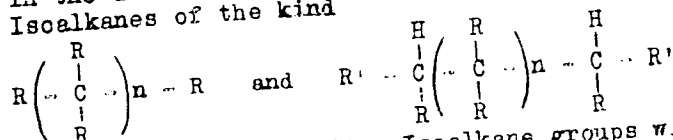
Density and Families of Isoalkanes

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 1 pp 95 98 (USSR)

ABSTRACT:

The data computed by the author by a method by Tatevskiy (Ref 13), the experimental data (Refs 7, 10) and the data calculated by Francis (Ref 12) served for plotting a diagram of the increase in the density of isoalkanes with the composition C_6-C_{20} (Fig 1). Isoalkanes of the kind



have the highest density. Isoalkane groups with the same number of different subtypes of atomic linkages but of different structure are known as families of isoalkanes. By computing of the density of one of the family members, the density of any other member of the respective family can be found with correctness to three significant figures. With increasing molecular weight, the number of families increases, and at a higher branching degree of the alkane molecule, the density of

Card 1/2

SOV/20.129.1.25/58

Density and Families of Isoalkanes

any isomer gradually grows until a maximum is attained.
Contrary to the lower alkanes C_7H_{16} - C_8H_{18} each of which contains an isomer with a maximum density, the higher alkanes exhibit whole alkane families with a maximum or approximatively maximum density. Proceeding from an investigation of chemical structural formulas of all members of the alkane family the formerly mentioned fact allows for a selection of the hydrocarbon the synthesis of which requires that smallest steric hindrances isomerization phenomena, and dissociation of initial compounds be surmounted. The term family may also be used for classifying other hydrocarbon groups, particularly of highest isoalkanes, acetylene hydrocarbons, etc. There are 1 figure and 21 references, 10 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

PRESENTED: April 10, 1959, by B. A. Kazanskiy, Academician

SUBMITTED: April 9, 1959
Card 2/2

Responsibility of African States in Regard to the Rights of Children in Relation to Their Own Culture

1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 26

Table 1. (1) Starting compound; (2) reagent; (3) solvent; (4) product; (5) yield; (6) melting point; (7) IR; (8) ^1H NMR; (9) ^{13}C NMR; (10) mass spectrum.

1)		
2)		
$\text{CH}_3 \cdot \text{CH}_3$		15
$\text{CH}_3 \cdot \text{CH} \cdot \text{CH} \cdot \text{CH}_3$		13
$\text{CH}_3 \cdot \text{CH}_2 \cdot \text{CH} \cdot \text{CH}_2 \cdot \text{CH} \cdot \text{CH}_3$		10
$\text{CH}_3 \cdot \text{CH} \cdot \text{C} \cdot \text{CH}_3$		10
CH_3		9
$\text{CH}_3 \cdot \text{C} \cdot \text{CH}_3$		9
CH_3		8
$\text{CH}_3 \cdot \text{C} \cdot \text{CH} \cdot \text{C} \cdot \text{CH}_3$	} $\frac{M}{T}$	8
$\text{CH}_3 \cdot \text{CH}_2$		7
CH_3		6
$\text{CH}_3 \cdot \text{C} \cdot \text{CH} \cdot \text{C} \cdot \text{CH}_3$		6
CH_3		5
$\text{CH}_3 \cdot \text{C} \cdot \text{CH}_2 \cdot \text{C} \cdot \text{CH}_3$		5
CH_3		4
$\text{CH}_3 \cdot \text{CH}_2$		4
CH_3		3
$\text{CH}_3 \cdot \text{C} \cdot \text{CH}_2 \cdot \text{C} \cdot \text{CH}_3$		3
CH_3		2
$\text{CH}_3 \cdot \text{CH}_2$		2
CH_3		1

Card 100

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Table ...

(2)		(4)
(3)		69,0
(a)		21,0
(b)		6,3
(c)		(5)
(d)		9,3

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Card 3/4

Reactivity of Alkenes, Arylalkenes and
Chlorides in Relation to Their Structure

SOV. CHEM. REV.

Patent 1987-8, G. S. ...
490 (1984); ...
Engng. Chem., ...; Gold, V. J. ...
J. Chem. Soc., ...

ASSOCIATION: N. D. Zelinskii Institute of Organic Chemistry of the
Academy of Sciences of the USSR, Institut Organicheskoy
Khimii imeni N. D. Zelinskogo, Akademicheskaya SSSR

SUBMITTED: May 20, 1984

Card 5/5

MESHCHERYAKOV, A.P.

SOV/P/560 1/75

Santini, P. I., Petrov, A. D., Melnikov, A. P.,
Meshcheryakov, A. P., Kuznetsov, V. P.,
Vasilev, S. A., Andreyev, D. H.

Vasilev, S. A., Andreyev, D. H.

Vasilev, S. A., Andreyev, D. H.

The study of 10 different isomers of octane
isomers, and the effect of the structure of the
molecules on the boiling point. The examples of
the isomers are: (1) n-octane, (2) 2-methyl-
heptane, (3) 3-methylheptane, (4) 4-methyl-
heptane, (5) 2,2-dimethylhexane, (6) 3,3-
dimethylhexane, (7) 2,3-dimethylhexane, (8)
2,4-dimethylhexane, (9) 3-ethylhexane, (10)
2-ethylhexane. The boiling points of these
isomers are: (1) 125.6°C, (2) 126.1°C, (3) 126.6°C,
(4) 127.1°C, (5) 127.6°C, (6) 128.1°C, (7) 128.6°C,
(8) 129.1°C, (9) 129.6°C, (10) 130.1°C.

Card 1/5

ASSOCIATION: Institute of Petrochemical Sciences of the USSR (Leningrad branch) AN SSSR

Card 5/5

MESHCHERYAKOV, A.P.; DOLGIY, I.Ye.

Reaction of alkenes with diazoacetic ester in the presence of the
catalyst CuSO_4 . Izv.AN SSSR Otd.khim.nauk no.5:931-934
My '60. (MIRA 13:6)

1. Institut organicheskoy khimii imeni M.D.Zelinskogo Akademii
nauk SSSR.
(Copper sulfate) (Olefins) (Acetic acid)

MESHCHERYAKOV, A.P.

Synthesis of peroxides based on isobutylene. Sbor. nauch. rab. Inst.
fiz-org. khim. AN BSSR no.8:3-12 '60. (MIRA 14:3)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Butyl peroxide) (Propane)

MESHCHERYAKOV, A.P.; DOLGIY, I.Ye.

Effect of the temperature on the reaction of alkenes with ethyl diazoacetate in the presence of copper sulfate acting as a catalyst. Izv. AN SSSR Otd. khim. nauk no.10:1874-1876 O '60. (MIRA 13:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.

(Olefins)

(Acetic acid)

(Copper sulfate)

MESHCHERYAKOV, A.P.; GLUKHOVTSEV, V.G.

Vinyl ethers of methyl- and dimethylcyclopropylcarbinols. Izv.
AN SSSR. Otd. khim. nauk no.11:2042-2043 N '60. (MIRA 13:11)

1. Institut organicheskoy khimii im.N.D.Lelinskogo AN SSSR.
(Ethers)

80057

5.4700

S/020/60/132/01/31/064
B011/B126

AUTHORS: Kachinskaya, O. N., Togoyeva, S. Kh., Meshcheryakov, A. P.,
Skuratov, S. M.

TITLE: Heats of Combustion¹ of 1,1-Dimethyl-2-alkyl Cyclopropanes¹

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 1, pp. 119-122

TEXT: The heats mentioned in the title were measured in the liquid phase. The authors give calculation formulas for all compounds of the above-mentioned homologous series. Temperature determination methods are described in Ref. 7. The substances analyzed were synthesized by the methods given in Ref. 8. They contained (according to Raman spectra) no alkenes. The authors analyzed 1,1-dimethyl-2-ethyl cyclopropane, 1,1-dimethyl-2-propyl cyclopropane, and 1,1-dimethyl-2-n-hexyl cyclopropane. Table 1 shows the heats of combustion of these compounds after 2 final distillations. From this it can be seen that their heat of combustion has not changed after the last distillation. By using the additive method concerning types and sub-divisions according to the hypothesis of V. M. Tatevskiy (Refs. 1, 2), the authors derive the general formula for calculating the said heats (1). For 1,1-dimethyl-2-n-alkyl cyclopropane (alkyl - any

Card 1/3

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Heats of Combustion of 1,1-Dimethyl-2-alkyl
Cyclopropanes

S/020/60/132/01/31/064
B011/B126

radical, from ethyl on, that is, when $n \geq 7$) the equation (1) assumes the form of (2). From the values of the heats of combustion of 1,1-dimethyl-2-ethyl- and 1,1-dimethyl-2-hexyl cyclopropanes and from the ascertained value A_{22} (156.23 kcal/mole), the heats of combustion of 1,1-dimethyl-2-propyl-, 1,1-dimethyl-2-n-butyl-, and 1,1-dimethyl-2-n-amyl cyclopropane were calculated. These heats ($-\Delta H_c^0$) and the heats of formation ($-\Delta H_f^0$) are set out in table 3. As can be seen from the given data, the calculated and the experimentally obtained heats of combustion agree. Concerning the stressed three- and four-membered rings the question still remained open, as to whether such a ring influences the properties of the side chains. It follows from the data given here that the cyclopropane ring does not influence the character of the bonds in the substituting alkyl, from ethyl on. This conclusion can apparently also be extended to alkyl-cyclobutane compounds. Thus, the heats of combustion of compounds of the 1,1-dimethyl-2-n-alkyl cyclopropane (n-alkylethyl and higher substituents) series can be calculated from equation (3). Equation (4) has the same object. From the heats of combustion of 1,1-dimethyl-2-ethyl-, 1,1-dimethyl-2-n-propyl-, and 1,1-dimethyl-2-n-hexyl cyclopropanes, as well as from the values of A_{22} (see

Card 2/3

80057

Heats of Combustion of 1,1-Dimethyl-2-alkyl
Cyclopropanes

S/020/60/132/01/31/064
B011/B126

above) and A_{21} ($=263.238$ kcal/mole) which are given in publications, the authors calculated the increment c' which occurs in equations (1) and (2). It was shown that $c = 851.74$ kcal/mole. The values of c' calculated for $-\Delta H_f$, R_M , and V_M are shown in table 2. It has now become possible to work out the heats of combustion not only for normal, but also for (from the second C-atom in the alkyl radical on) branched 1,1-dimethyl-2-alkyl cyclopropanes. In this case equation (1) assumes the form of equation (5). The value of the coefficients A_{ij} for the C-C bonds of different sub-types of branched alkanes can be taken from publications (Ref. 1). There are 3 tables and 8 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: December 22, 1959, by A. N. Nesmeyanov, Academician

SUBMITTED: December 16, 1959

Card 3/3

MESHCHERYAKOV, A.P.; PETROVA, L.V.; GLUKHOVTSEV, V.G.

Synthesis of di-, tri-, and tetrasubstituted cyclopropane hydrocarbons by the Kishner reaction. Izv. AN SSSR. Otd. khim. nauk no. 1:114-119 Ja '61. (MIRA 14:2)

1. Insitut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Cyclopropane)

MESHCHERYAKOV, A.P.; DOLGIY, I.Ye.

Synthesis of dimethylalkylcyclopropylcarbinols and methyl alkylcyclopropyl ketones. Izv.AN SSSR Otd.khim.nauk no.3:496-501 Mr '61.

(MIRA 14:4)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR.

(Methanol) (Ketones)

23591

S/062/61/000/005/008/009

B118/B220

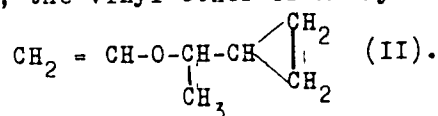
15 8102 2209

AUTHORS: Shostakovskiy, M. F., Gracheva, Ye. P., Meshcheryakov, A. P.,
and Glukhovtsev, V. G.

TITLE: Polymerization of the vinyl ether of methyl cyclopropyl
carbinol

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh
nauk, no. 5, 1961, 924 - 927

TEXT: In Ref. 1 (B. A. Zakharov et al., Dokl. AN SSSR, 122, no. 5, 814
(1958)), it has been stated that the double bond of the vinyl ethers has
an increased nucleophilic character which manifests itself in various
addition reactions, transformations, and especially in the polymerization
reaction. For the study of the conditions of polymerization of the com-
pounds $\text{CH}_2 = \text{CHOR}$ (I), the vinyl ether of methyl cyclopropyl carbinol is
of special interest:

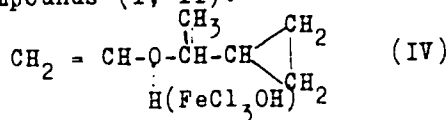
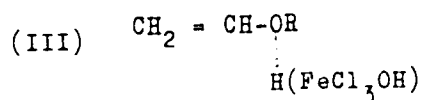


According to the rule of Markovnikov, the cyclopropyl group of this ether,
Card 1/3

23591
S/062/61/000/005/008/009
B116/B220

Polymerization of the...

as possible carrier of the propenyl group, is able to add various polar compounds. Moreover, this ether may be of interest as test substance for the synthesis of different polymers in the polymerization and copolymerization reactions. The present paper describes the polymerization of the vinyl ether of methyl cyclopropyl carbinol in the presence of the initiators FeCl_3 and azonitrile isobutyric acid under optimum conditions for the polymerization of the vinyl alkyl ethers. It has been found that compound (II) shows higher reactivity during polymerization in the presence of a 5 % solution of iron perchloride (in dioxane) than vinyl alkyl ethers (I) under the same conditions. First of all, this is evident from the fact that the polymerization of the ether (II) begins at 0°C and the highest yield in polymer is obtained at a temperature of -17 to -20°C whereas other vinyl alkyl ethers polymerize at boiling temperature only. The reason for such diverging temperatures of polymerization is the different stability of the ozonium complexes of these compounds (I, II):



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Polymerization of the...

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Evidently, complex (IV) is of lower stability; its decomposition is effected at a low temperature resulting also in the formation of a polymer at lower temperature. The use of azonitrile isobutyric acid as initiator instead of FeCl_3 did not give any results. There are 3 Soviet-bloc references.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences USSR)

SUBMITTED: October 12, 1960

Card 3/3

MESHCHERYAKOV, A.P.; GLUKHOVTSEV, V.G.; LEMIN, N.N.

1-Cyclopropyl-2- α -furylcyclopropane and its transformations.
Izv.AN SSSR.Otd.khim.nauk no.10:1901-1903 0 '61. (MIRA 14:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Cyclopropane)

MESHCHERYAKOV, A.P.; ERZYUTOVA, Ye.I.; GO CHUN'-I [Kuo Ch'un-i]

Catalytic synthesis of isoparaffin hydrocarbons of the composition
C₂₀ - C₃₃ of high density. Izv. AN SSSR Otd.khim.nauk no.12:2198-
2203 D '61. (MIRA 14:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Paraffins)

MESHCHERYAKOV, A.P.; OLUKHOVTSEV, V.G.

Preparation of 1-cyclopropyl-2-(butanone-1'-ol-4')cyclopropane.
Izv. AN SSSR Otd.khim.nauk no.12:2248-2250 D '61. (MIRA 14:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Cyclopropane)

MESHCHERYAKOV, A.P.; PETROVA, L.V.

Synthesis of 3,3,4-trimethyl-1-pentyne and 2,3,3,8,8,9-hexamethyl-4,6-decadiyne. Izv. AN SSSR Otd.khim.nauk no.12:2250-2252 D '61.
(MIRA 14:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Pentyne) (Decadyine)

MESHCHERYAKOV, A.P.; DOLGIY, I.Ye.

Synthesis of certain compounds having two adjacent three-membered rings. Dokl. AN SSSR 139 no.6:1379-1382 Ag '61.
(MIRA 14:8)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
Predstavleno akademikom B.A. Arbuzovym.
(Cyclic compounds)

MESHCHERYAKOV, A.P.; GLUKHOVTSEV, V.G.

Synthesis of 1,3-dicyclopropyl-2-butene-1-one. Izv. AN SSSR Otd.-
khim.nauk no.1:176-178 Ja '62. (MIRA 1:1)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Ketone) (Cyclopropane)

S/062/63/000/003/017/018
B101/B186

AUTHORS: Dolgiy, I. Ye., Meshcheryakov, A. P., and Gayvoronskaya, G.K.

TITLE: Reaction of diazoacetic ester with unsaturated silicon and germanium compounds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 3, 1963, 572 - 575

TEXT: The reaction of ethyl diazoacetate with trimethyl allyl silane, trimethyl allyl germane and triethyl vinyl silane enabled organic compounds of silicon and germanium containing cyclopentane rings to be synthesized for the first time. For comparison the reaction was also made with the carbon analog 4,4-dimethyl-pentane-1. The following reaction products were obtained: Ethyl ester of the 2-(trimethyl silyl)-cyclopropane carboxylic acid, yield 66.5 %, b. p. 86.5 - 87.5°C/10.5 mm Hg, $d_4^{20} = 0.9072$, $n_D^{20} = 1.4400$; ethyl ester of the 2-(trimethylgermyl)-cyclopropane carboxylic acid, yield 66.5 %, b.p. 84.5 - 85°C/9 mm Hg, $d_4^{20} = 1.0999$, $n_D^{20} = 1.4550$; ethyl ester of the 2-triethyl silyl cyclopropane

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B101/B186

Reaction of diazoacetic ester with ...
 carboxylic acid, yield 42 %, b.p. 110°C/11 mm Hg, $d_4^{20} = 0.9214$, $n_D^{20} = 1.4543$ and ethyl ester of the 2-neopentyl cyclopropane carboxylic acid, yield 59 %, b.p. 85 - 86°C/15 mm Hg, $d_4^{20} = 0.9054$, $n_D^{20} = 1.4342$. There is 1 table.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: October 31, 1962

Card 2/2